

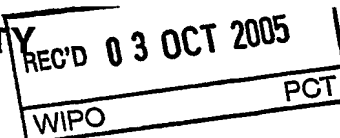
## PATENT COOPERATION TREATY


## PCT

## INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)



Applicant's or agent's file reference PD030076	<b>FOR FURTHER ACTION</b>	See Form PCT/IPEA/416
International application No. PCT/EP2004/004795	International filing date (day/month/year) 06.05.2004	Priority date (day/month/year) 14.07.2003
International Patent Classification (IPC) or national classification and IPC H04N7/24, H04N5/00		
Applicant DEUTSCHE THOMSON-BRANDT GMBH		
<p>1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.</p> <p>2. This REPORT consists of a total of 5 sheets, including this cover sheet.</p> <p>3. This report is also accompanied by ANNEXES, comprising:</p> <p>a. <input checked="" type="checkbox"/> sent to the applicant and to the International Bureau a total of 3 sheets, as follows:</p> <p><input checked="" type="checkbox"/> sheets of the description, claims and/or drawings which have been amended and are the basis of this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).</p> <p><input type="checkbox"/> sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.</p> <p>b. <input type="checkbox"/> (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or tables related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).</p>		
<p>4. This report contains indications relating to the following items:</p> <p><input checked="" type="checkbox"/> Box No. I Basis of the opinion</p> <p><input type="checkbox"/> Box No. II Priority</p> <p><input type="checkbox"/> Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</p> <p><input type="checkbox"/> Box No. IV Lack of unity of invention</p> <p><input checked="" type="checkbox"/> Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</p> <p><input type="checkbox"/> Box No. VI Certain documents cited</p> <p><input type="checkbox"/> Box No. VII Certain defects in the international application</p> <p><input type="checkbox"/> Box No. VIII Certain observations on the international application</p>		
Date of submission of the demand  13.01.2005	Date of completion of this report  05.10.2005	
Name and mailing address of the international preliminary examining authority:  European Patent Office - P.B. 5818 Patentlaan 2 NL-2280 HV Rijswijk - Pays Bas Tel. +31 70 340 - 2040 Tx: 31 651 epo nl Fax: +31 70 340 - 3016	Authorized Officer  Hampson, F  Telephone No. +31 70 340-3831	

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**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/EP2004/004795

**Box No. 1 Basis of the report**

1. With regard to the **language**, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.
- ☐ This report is based on translations from the original language into the following language , which is the language of a translation furnished for the purposes of:
- ☐ international search (under Rules 12.3 and 23.1(b))
  - ☐ publication of the international application (under Rule 12.4)
  - ☐ international preliminary examination (under Rules 55.2 and/or 55.3)
2. With regard to the **elements\*** of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

**Description, Pages**

1-9 as originally filed

**Claims, Numbers**

1-10 received on 13.01.2005 with letter of 10.01.2005

**Drawings, Sheets**

1/2, 2/2 as originally filed

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing

3. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

- ☐ the description, pages
- ☐ the claims, Nos.
- ☐ the drawings, sheets/figs
- ☐ the sequence listing (*specify*):
- ☐ any table(s) related to sequence listing (*specify*):

\* If item 4 applies, some or all of these sheets may be marked "superseded."

**INTERNATIONAL PRELIMINARY REPORT  
ON PATENTABILITY**

International application No.  
PCT/EP2004/004795

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**Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

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1. Statement

Novelty (N)	Yes: Claims	1-10
	No: Claims	
Inventive step (IS)	Yes: Claims	1-10
	No: Claims	
Industrial applicability (IA)	Yes: Claims	1-10
	No: Claims	

2. Citations and explanations (Rule 70.7):

**see separate sheet**

**Re Item V**

**Reasoned statement with regard to novelty, inventive step or industrial applicability;  
citations and explanations supporting such statement**

Reference is made to the following documents:

- D1: "Information Technology - Generic Coding of moving pictures and audio:systems  
Amendment 3: AudioBIFS Extensions" December 2003 (2003-12), ISO/IEC 14496-  
11/2003 PDAM 3, N6207 , WAIKOLOA, HAWAI , XP002267524
- D2: WO 98/36559 A (UNIV COLUMBIA ;KALVA HARI (US); ELEFThERIADIS  
ALEXANDROS (US)) 20 August 1998 (1998-08-20)

1. Document D1 discloses the AdvancedAudioBuffer node which is the subject of the present application. However, D1 is published after the filing date of this application.
2. Document D2 is considered the best prior art published in time with respect to the claimed subject-matter.
- 2.1 With respect to independent claim 1, D2 discloses (the references in parentheses referring to this document):

Method for decoding a data stream (Fig. 6 - object-based bitstream), the data stream containing a first and a second substream, the first substream containing first and second multimedia data packets (LC1, page 11, line 18) and the second substream containing control information (LC0, page 11, lines 14-15), wherein the multimedia data packets contain an indication of the time when to be presented (Presentation time stamps, PTS, page 5, line 20), and are decoded prior to the indicated presentation time, and wherein

the first decoded multimedia data packets are buffered (page 12, lines 10-11) at least until, after a further processing, they can be presented in due time, and the second multimedia data packets are also buffered.

- 2.2 The subject-matter of claim 1 differs from the disclosure of D2 in that:

- the second multimedia data packets either replacing or being appended to the first

decoded multimedia data packets in the buffer;

- said control information containing first, second and third control data;
- the first control data (Length) defining the allocated buffer size;
- the second control data (LoadMode) defining whether the other multimedia data packets are appended to the first packets or replace them; and
- the third control data (StartLoadTime, StopLoadTime) defining a multimedia data packet to be buffered.

2.3 The subject-matter of claim 1 is therefore new (Article 33(2) PCT).

2.4 The problem to be solved by the present invention may be regarded as providing means to indicate how to handle the loading of the data block (description as filed, page 3, lines 18-21)

2.5 The solution to this problem proposed in claim 1 of the present application is considered as involving an inventive step (Article 33(3) PCT) for the following reasons:

D2 discloses storage of data objects in an object cache, and the objects can be kept or deleted by flushing of the cache.

Neither D2, nor the other cited documents, however, disclose or hint at the use of three control data to control the storage of the data objects.

3. Independent claim 8 is directed to an apparatus comprising means in which the method steps of claim 1 are performed. The above analysis is also valid for claim 8, therefore this claim also meets the requirements of novelty (Article 33(2) PCT) and inventive step (Article 33(3) PCT).
4. Claims 2-7 and 9 and 10 are dependent on independent claims 1 and 8 respectively and as such also meet the requirements of the PCT with respect to novelty and inventive step.

New Claims

1. Method for decoding a data stream, the data stream containing a first and a second substream, the first substream (14) containing first and second multimedia data packets and the second substream containing control information (10), wherein the multimedia data packets contain an indication of the time when to be presented and are decoded prior to the indicated presentation time, and wherein the first decoded multimedia data packets are buffered at least until, after a further processing, they can be presented in due time, and the second multimedia data packets are also buffered, **characterized in**
- the second multimedia data packets either replacing or being appended to the first decoded multimedia data packets in the buffer;
  - said control information containing first, second and third control data;
  - the first control data (Length) defining the allocated buffer size;
  - the second control data (LoadMode) defining whether the second multimedia data packets are appended to the first multimedia data packets or replace them; and
  - the third control data (StartLoadTime, StopLoadTime) defining one or more multimedia data packets to be buffered.
2. Method according to claim 1, wherein the second control data (LoadMode) defines one of a plurality of operation modes, wherein in a first mode buffering of multimedia data packets is performed when the value of the first control data (Length) changes, and in a second and third mode the third control data (StartLoadTime, StopLoadTime)

are valid for specifying the multimedia data packets to be buffered, wherein in the second mode the multimedia data packets replace the buffer contents and in the third mode the multimedia data packets are appended to the buffer contents.

3. Method according to claim 2, wherein the third mode has two variations, wherein in the first variation the buffering of multimedia data packets stops when the buffer is full, and in the second variation previously buffered data may be overwritten when the buffer is full.
4. Method according to any of claims 1-3, wherein the method is utilized in an instance of a processing node and wherein the first control data (Length) defines the allocated buffer size at node creation time.
5. Method according to any of claims 1-4, wherein labels are attached to the buffered first and other multimedia data packets, and the packets may be accessed through their respective label.
6. Method according to the preceding claim, wherein a label attached to the buffered data packets contains an index relative to the latest received data packet.
7. Method according to any of claims 1-6, wherein the first substream contains audio data and the second substream contains a description of the presentation.
8. Apparatus for decoding a data stream, the data stream containing a first and a second substream, the first substream (14) containing first and second multimedia

data packets and the second substream containing control information (10), wherein the multimedia data packets contain an indication of the time when to be presented and wherein the first and second multimedia data packets are buffered, **characterized in** containing

- buffering means for said buffering of the first and the second multimedia data packets, wherein the second multimedia data packets may in a first mode replace and in a second mode be appended to the first multimedia data packets;
- means for extracting from said control information (10) first, second and third control data;
- means for applying the first control data (Length) to define the allocated buffer size;
- means for applying the second control data (LoadMode) to define whether the second multimedia data packets are appended to the first multimedia data packets or replace them; and
- means for applying the third control data (StartLoadTime, StopLoadTime) to define a multimedia data packet to be buffered.

9. Apparatus according to claim 8, further comprising means for attaching labels to the buffered multimedia data packets, and means for accessing, retrieving or deleting the packets through their respective label.

10. Apparatus according to claim 8 or 9, wherein the data stream is an MPEG-4 compliant data stream.